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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/961,171	09/24/2001	Hiromi Yuasa	214298US2RD	7210
22850	7590	03/03/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.			EVANS, JEFFERSON A	
1940 DUKE STREET			ART UNIT	
ALEXANDRIA, VA 22314			PAPER NUMBER	
			2652	
DATE MAILED: 03/03/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/961,171

Applicant(s)

YUASA ET AL

Examiner

Jefferson Evans

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 8-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 16-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3,8.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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Claims 1 to 20 are pending.

***Election/Restrictions***

1. Applicant's election with traverse of Species One, figures 1a to 5, in Paper No. 7 is acknowledged. The traversal is on the ground(s) that the species have overlapping searches and that the search of the entire application can be made without serious burden to the Examiner. This is not found persuasive because the Examiner's position remains that the number of species and the structural differences there between are enough to meet the threshold at which the requirement for the election of a single species to be examined is considered appropriate. Applicant states that claims 3 to 7 read on the elected species. The Examiner agrees and additionally considers claim 1, 2, and 16-20 to read on the elected species. Claims 8 to 15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim

The requirement is still deemed proper and is therefore made FINAL.

***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Specification***

3. The disclosure is objected to because of the following informalities:

A...page 21 – line 18, it appears "14F" should be -- 13F --.

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B...The Brief Description of the Drawings section of the specification on pages 15 to 18 should have separate references to figures 2(a) and 2(b), 3(a) and 3(b), 4(a) and 4(b), 6(a) and 6(b), 7(a) and 7(b), 11(a) and 11(b), 14(a)-14(d), 15(a)-15(d), 16(a)-16(d), 17(a) and 17(b), and 18(a) and 18(b). The main body of the specification should separately discuss figures 11(a) and 11(b) at pages 24 and 25.

***Claim Rejections - 35 USC § 112***

4. Claims 2-7, 17, 18, and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Independent claims 2 and 5 set forth an electrode including a pillar electrode portion, a first feed portion connected to the pillar electrode portion, and a second feed portion connected to the first feed portion, however, figures 1a to 5 and the associated disclosure only appear to disclose a single feed portion in the form of, looking at figure 1 for example, element 15.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the

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international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 16, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Sakakima et al (U.S. 6,077,618) or Abraham et al (U.S. 6,452,764).

Sakakima discloses a free layer 1, a fixed layer 3, and a nonmagnetic insulating layer 2 formed of a nonconductive portion 2 and conductive portions C such that either portion 2 or portions C could be read on the claimed nonmagnetic insulating layer and would have a sectional area smaller than either the area of the free layer or the area of the fixed layer. The structure of Sakakima can be utilized as a read head to read information from a magnetic disk.

Abraham discloses a free layer 524, a fixed layer 520, and a nonmagnetic insulating layer formed of a first portion 521 and second portions 530 such that the first portion 521 could be read on the claimed nonmagnetic insulating layer and would have a sectional area smaller than either the area of the free layer or the area of the fixed layer. The structure of Sakakima can be utilized as a read head to read information from a magnetic disk.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 2-7, 17, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakakima et al (U.S. 5,715,121). Sakakima discloses a magnetic read head which may be utilized to read from a magnetic disk and which includes a stack having a free layer 1, a nonmagnetic layer 2, a fixed layer 3, and additionally has electrodes 11 with sectional areas smaller than that of the stack.

Sakakima discloses that the electrodes are connected to leads (column 3 - line 22) but does not disclose the nature of those leads.

Official Notice is given that it was obvious to have electrodes attached to lead portions that have a larger sectional area than the electrodes and/or to have the electrodes connected to shields that also serve as leads.

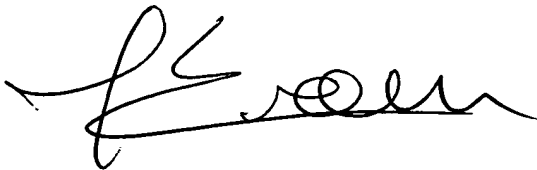
It would have been obvious to one of ordinary skill in the art at the time the invention was made to connect the electrodes of Sakakima to lead portions that have a larger sectional area than the electrodes and/or to have the electrodes connected to shields that also serve as leads. The motivation would have been: to have the electrodes connected to larger sectional area leads would provide advantages of lowering current density and thus lower heat generation, and/or providing Sakakima with shields that also act as leads would result in the larger sectional areas for the leads relative to the electrodes and combining the shield and lead functions reduced the number of layers required and thus allowed for reduced construction complexity.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jefferson Evans whose telephone number is 703-308-1610. The examiner can normally be reached on Monday to Friday, 9:00am to 5:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on 703-305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JAE  
February 27, 2004

Jefferson Evans  
Primary Examiner  
Art Unit 2652

**JEFFERSON EVANS**  
**PRIMARY EXAMINER**